

less toxic for barley. Dilutions as great as 1 part to 4,000,000 to 10,000,000 proved somewhat toxic. Hydrocyanic acid showed no stimulation and the cyanogen radicle is the toxic agent.

BRENCHLEY<sup>26</sup> has also studied the effect of various phenols (phenol o-cresol, m-cresol, p-cresol, resorcinol, pyrocatechol, pyrogallol, phloroglucin, orcinol) upon the growth (as indicated by increased dry weight) of barley and peas in water cultures. The purpose was to learn the direct effects of these phenols on the plants, so that it could be considered in using the phenols as partial soil sterilizers. The following concentrations were used: M/100, M/100×1/5, M/100×1/5<sup>2</sup>, and M/100×1/6<sup>2</sup>. The general physiological effect was the same for all the phenols, but the concentration at which these effects showed varied considerably with the different members. The highest concentration was quickly fatal with all the phenols, and the next to highest concentration with o-cresol, pyrocatechol, and pyrogallol, but there was a slight recovery in the others. The lowest concentration showed no injury in any. None of the solutions showed any stimulus effect in any concentrations.—WM. CROCKER.

**Regeneration in Phegopteris.**—Miss BROWN<sup>27</sup> has recorded the results of some experiments on regeneration in *Phegopteris polypodioides*. Near the base of the petiole of a detached leaf regeneration took place in contact with sand moistened with Knop's solution in moist air. A prothallium-like growth appeared, and from this were developed rhizoids, structures intermediate between leaves and prothallia, and true leaves. The possible determining factors are enumerated, and among them the separation of the leaf from the parent body was evidently necessary; at least it seems evident that "some phase of nutrition must be an important factor in regeneration, if not the most important factor."—J. M. C.

**Selaginella.**—VAN ESELTINE<sup>28</sup> has begun a series of contributions dealing with the American species of *Selaginella* allied to *S. rupestris*. The group is in need of critical revision, and the results will be of interest to the morphologist as well as the taxonomist. The first paper deals with the representatives of the group occurring in the Gulf Coastal Plain and the territory immediately adjacent to the northeast. In this region 8 such species are recognized, 2 of which are described as new, and an additional one was described by the same author recently. The numerous drawings and photographic plates supplement well the full descriptions.—J. M. C.

<sup>26</sup> BRENCHLEY, WINIFRED E., Organic plant poisons. II. Phenols. Ann. Botany 32:259-278. 1918.

<sup>27</sup> BROWN, ELIZABETH W., Regeneration in *Phegopteris polypodioides*. Bull. Torr. Bot. Club 45:391-397. figs. 3. 1918.

<sup>28</sup> VAN ESELTINE, G. P., The allies of *Selaginella rupestris* in the southeastern United States. Contrib. U.S. Nat. Herb. 20:159-172. pls. 15-22. figs. 63-70. 1918.